

Penobscot Valley Hospital	)	Departmental
Penobscot County	)	Findings of Fact and Order
Lincoln, Maine	)	Air Emission License
A-863-71-A-N	)	After the Fact

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## I. REGISTRATION

### A. Introduction

Penobscot Valley Hospital (PVH) in Lincoln, Maine has applied, after the fact, for an Air Emission License permitting the operation of three oil fired boilers associated with their Lincoln Facility.

### B. Emission Equipment

PVH is authorized to operate the following equipment:

#### Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	4.2	30	#2 Fuel Oil, 0.35	1
Boiler #2	4.2	30	#2 Fuel Oil, 0.35	1
Boiler #3	4.2	30	#2 Fuel Oil, 0.35	1

#### Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Firing Rate (gal/hr)</u>	<u>Pollution Controls</u>
Diesel Generator	125	6	Emergency Use Only

### C. Application Classification

PVH is classified as an existing source that is applying for its first air emission license, after the fact. The Department has determined the facility is a minor source and the application has been processed through Chapter 115 of the Department's regulations.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for an after-the-fact license requires an analysis similar to a Best Available Control Technology (BACT) analysis per Chapter 115 of the Department's regulations.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

### B. Oil Fired Boilers

Boilers 1,2 and 3 are used primarily for steam for building heating. They are all identical units and will be firing low sulfur #2 fuel oil.

BACT for PVH for boilers 1,2,and 3, will be the following:

PM/PM<sub>10</sub> – 0.08 lb/MMBtu

SO<sub>2</sub> – combustion of 0.35% sulfur #2 fuel oil, 0.22 lb/MMBtu.

NO<sub>x</sub> – good combustion, 0.30 lb/MMBtu

CO – good combustion, 0.04 lb/MMBtu

VOC – good combustion, 0.01 lb/MMBtu

Opacity – Visible Emissions shall not exceed 10% opacity on a six minute block average basis, for more than two, six minute block averages in a three hour period.

The licensed lb/hr emission limits are based on the BACT lb/MMBtu.

1. PM and PM<sub>10</sub>

PVH has proposed combustion of clean fuels and good combustion practices as BACT for particulate matter.

Chapter 103 of the Department's regulations is applicable to PVH, however, the BACT emission limit of 0.08 lb/MMBtu is more stringent. Compliance with the BACT limit is compliance with Chapter 103.

2. SO<sub>2</sub>

PVH has proposed combustion of low sulfur fuel as BACT.

PVH shall keep fuel records identifying sulfur content.

Chapter 106 of the Department's regulations (Low Sulfur Fuel) is applicable to PVH. The BACT limit of 0.35% sulfur is below the sulfur fuel content in Chapter 106.

3. NO<sub>x</sub>

PVH has proposed combustion of clean fuels and good combustion practices as BACT for NO<sub>x</sub>.

4. CO

PVH has proposed combustion of clean fuels and good combustion practices as BACT for CO.

5. VOC

PVH has proposed combustion of clean fuels and good combustion practices as BACT for VOC.

6. Opacity

Chapter 101 of the Department's regulations (Visible Emissions) is applicable to PVH. Visible Emissions shall not exceed 10% opacity on a six minute block average basis, for more than two, six minute block averages in a three hour period.

**C. Emergency Generator**

The emergency generator is used for providing electrical power in the event offsite power is lost.

**1. BACT findings**

BACT for PVA for emission the Emergency Generator to be the following:

PM/PM<sub>10</sub> - 0.12 lb/MMBtu

SO<sub>2</sub> – combustion of 0.35% sulfur #2 fuel oil.\*

NO<sub>x</sub> – 4.41 lb/MMBtu

CO – 0.95 lb/MMBtu

VOC – 0.350 lb/MMBtu

Opacity - Visible Emissions shall not exceed 10% opacity on a six minute block average basis.

The licensed lb/hr emission limits are based on the BACT lb/MMBtu.

\*Using a sulfur limit of 0.35% allows PVH to operate Boilers 1,2,and 3, and the Emergency Generator from the same fuel tank.

PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, and VOC emissions shall be minimized by limiting the operation of the Emergency Generator to 150 hr/yr of emergency use.

**D. Definition of “Emergency”**

Per MEDEP Chapter 100, the definition of emergency for Chapter 115 purposes is the following:

“... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

**E. Fuel and Emission Restrictions**

PVH shall be restricted to 80,000 gal of #2 fuel oil with a sulfur content not to exceed 0.35% by weight, based on a 12 month rolling total. Emissions shall not exceed the following:

**Total Allowable Annual Emission for the Facility**  
**Tons/year**  
(used to calculate the annual license fee)

<u>Equipment</u>	<u>PM</u>	<u>PM<sub>10</sub></u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>
Boiler #1	0.40	0.40	1.75	1.49	0.18	0.01
Boiler #2	0.40	0.40	1.75	1.49	0.18	0.01
Boiler #3	0.40	0.40	1.75	1.49	0.18	0.01
Emergency Gen.	0.01	0.01	0.02	0.27	0.06	0.02
<b>TOTALS</b>	<b>1.21</b>	<b>1.21</b>	<b>5.27</b>	<b>4.74</b>	<b>0.60</b>	<b>0.05</b>

### III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor existing source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

### ORDER

The Department hereby grants Air Emission License A-863-71-A-N, after the fact, subject to the following conditions:

#### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The

Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
  - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

- a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - b. pursuant to any other requirement of this license to perform stack testing.
  - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department

within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

### **SPECIFIC CONDITIONS**

- (16) Boilers 1,2, and 3
- A. Fuel use shall not exceed 80,000 gal/yr #2 fuel oil with a maximum sulfur content of 0.35% by weight. Fuel use records depicting the gallons and % sulfur content shall be maintained.
- B. Emissions shall not exceed the following:

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #1	lb/MMBtu	0.080	-	-	-	-	-
	lb/hr	0.340	0.340	0.910	1.260	0.150	0.010
Boiler #2	lb/MMBtu	0.080	-	-	-	-	-
	lb/hr	0.340	0.340	0.910	1.260	0.150	0.010
Boiler #3	lb/MMBtu	0.080	-	-	-	-	-
	lb/hr	0.340	0.340	0.910	1.260	0.150	0.010

- C. Compliance shall be demonstrated through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A.
- D. Visible Emissions shall not exceed 10% opacity on a six minute block average basis, for more than two, six minute block averages in a three hour period.



(17) Emergency Generator

- a. PVH shall not exceed 150 hrs. of emergency operation.
- b. Emissions shall be limited to the following:

Equipment		PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Emerg. Gen.	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.10	0.10	0.30	3.63	0.78	0.29

- c. Visible Emissions shall not exceed 10% opacity on a six minute block average basis.
  - d. PVH shall maintain records of all maintenance and operation of the Emergency Generator.
- (18) PVH shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605).
- (19) PVH shall pay the annual air emission license fee within 30 days of **May, 31st** of each year. Pursuant to Title 38-353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3.

**Penobscot Valley Hospital  
Penobscot County  
Lincoln, Maine  
A-863-71-A-N**

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**Departmental  
Findings of Fact and Order  
Air Emission License  
After the Fact**

(20) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: Apr 7, 2003  
Date of application acceptance: Apr 14, 2003

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Jonathan Voisine, Bureau of Air Quality.